CLAIMS

What Is Claimed Is:

1.   A direction-finding method comprising the steps of:

establishing a cross-over position point;

relocating a receiver to a new receiver spacial location;

said receiver at said new receiver position receiving a transmission from a transmitter at a transmitter position;

determining a real-time line of bearing from said receiver to said transmitter;

generating a connecting vector from said real-time line of bearing to said cross-over position point; and

identifying a real-time position of said transmitter along said connecting vector.

2.   The method of Claim 1, wherein said identifying comprises identifying a best guess transmitter position responsive to said real-time position of said transmitter.

3.   The method of Claim 2, further comprising the steps of:

again relocating said receiver to a new receiver spacial location;

said receiver at said new receiver position receiving a transmission from said transmitter at a transmitter position;

determining another said real-time line of bearing from said receiver to said transmitter;

generating a said connecting vector from said last real-time line of bearing to said best guess transmitter position; and

identifying said best guess position of said transmitter along said connecting vector.

4.   The method of Claim 3, wherein:

said determining step further comprises determining a quality factor for said real-time line of bearing; and

said identifying step further comprises assigning a probability factor to said real-time position of said transmitter responsive to said quality factor.

5.   The method of Claim 3, further comprising a repeating step to repeat said relocating, receiving, determining, generating and identifying steps until said probability factor exceeds a predetermined threshold value.

6.   The method of Claim 3, further comprising a repeating step to repeat said relocating, receiving, determining, generating and identifying steps until a user terminates said direction finding method.

7.   The method of Claim 3, further comprising a repeating step to repeat said relocating, receiving, determining, generating and identifying steps until said probability factor meets a user-defined threshold value.

8.   A direction-finding method executed by a portable DF set comprising a receiver and a programmable computing system comprising a processor, an input device, an output device and a storage medium, the method comprising the steps of:

establishing a cross-over position point representing a position of a transmitter and outputting said point at said output device;

moving said DF set to a new DF set position;

receiving at said DF set in said new DF set position, a transmission from said transmitter;

determining, via said programmable computer, a real-time line of bearing from said DF set to said transmitter responsive to said transmission;

generating, via said programmable computer, a connecting vector from said real-time line of bearing; and

determining a real-time transmitter position along said connecting vector and outputting said position at said output device.

9. The method of Claim 8, wherein said identifying comprises identifying a best guess transmitter position responsive to said real-time position of said transmitter.

10. The method of Claim 9, further comprising the steps of:

again relocating said receiver to a new receiver spacial location;

said receiver at said new receiver position receiving a transmission from said transmitter at a transmitter position;

determining another said real-time line of bearing from said receiver to said transmitter;

generating a said connecting vector from said last real-time line of bearing to said best guess transmitter position; and

identifying said best guess position of said transmitter along said connecting vector.

11. The method of Claim 10, wherein:

said determining step further comprises determining a quality factor for said real-time line of bearing; and

said identifying step further comprises assigning a probability factor to said real-time position of said transmitter responsive to said quality factor.

12. The method of Claim 10, further comprising a repeating step to repeat said relocating, receiving, determining, generating and identifying steps until said probability factor exceeds a predetermined threshold value.

13. The method of Claim 10, further comprising a repeating step to repeat said relocating, receiving, determining, generating and identifying steps until a user terminates said direction finding method.

14. The method of Claim 10, further comprising a repeating step to repeat said relocating, receiving, determining, generating and identifying steps until said probability factor meets a user-defined threshold value.

15. A real-time direction-finding system, comprising:

a transmitter transmitting wireless transmissions, said transmitter defining a spacial location;

a DF set comprising a movable receiver for receiving said transmissions; and

a computing device for determining said special location of said transmitter responsive to transmissions received by said movable receiver and not responsive to other said receivers.

16. The system of Claim 15, wherein said computing device operatively:

generates a cross-over point;

receives a transmission signal responsive to a transmission received by said DF set after said DF set has been moved to a new spacial location;

determines a real-time line of bearing from said DF set to said transmitter responsive to said transmission signal;

generates a connecting vector from said real-time line of bearing; and

determines a real-time transmitter position along said connecting vector and outputting said position at said output device.